

Advertisements.

ORDINARY RATES.

Inside Page, each insertion, - 75 cents a line
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The above are char est per agate line—about eight words per line. This notice shows the width of the line, and is set in agate type.



OVERMAN WHEEL CO.
BOSTON, WASHINGTON, DENVER, SAN FRANCISCO.
A. G. SPALDING & BROS., Special Agents, CHICAGO, NEW YORK, PHILADELPHIA.

GOLD FORGED PRODUCT.

Fluted Tire Bolt

Patented Nov. 11, 1890; Oct. 20, 1891.



stiffer and stronger than a common bolt. The fluted shank prevents the bolt from turning in the rim and tire.

COLD FORGED MACHINE SCREWS, STOVE BOLTS, LOCK CAP SCREWS, SIDE KNOB SCREWS, THREADED WIRES.

AMERICAN SCREW COMPANY, PROVIDENCE, R. I.

A New Invention. The Lightning Postage Indicator Scales.
Pat'd Feb. 11, 1900.
Send for circular and price. Instantly indicates the correct amount of postage required on all mail matter.

SAWS Wanted 50,000 Sawyers SAWS
send us their full address for a copy of Emerson's Book of SAWS, new 1893 edition. We are first to introduce NATURAL GAS for heating and tempering saws with wonderful effect upon improving their quality and toughness, enabling us to reduce prices. Address: F. M. ELLIS & SONS, SAWS & CO. (Limited), Beaver Falls, Pa.

RIEDLER ENGINES AND PUMPING ARE POSITIVELY BETTER THAN ANY OTHERS. AIR COMPRESSORS UPON THE MARKET. FOR EVIDENCE OF THIS FACT WRITE FOR PARTICULARS TO FRASER & CHALMERS 133 FULTON ST. W. CHICAGO, ILL.

"O how much more doth beauty beauteous seem By that fair ornament which truth doth give."

The gold, filled, and coin-silver cases of the new Quick-Winding WATERBURY watch seem even more "beauteous" because of its truthful time-keeping. The owner may be twice proud: to show it and to rely upon it.

All jewelers sell in many different styles: Ladies' gentlemen's and boys' watches. There could be no more acceptable gift. \$4 to \$15.

PATENTS!

MESSRS. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN, continue to examine improvements, and to act as Solicitors of Patents for inventors.
In this line of business they have had forty-five years' experience, and now have renovated facilities for the preparation of Patent Drawings, Specifications, and the prosecution of Applications for Patents in the United States, Canada, and Foreign Countries.

THE BRIDGEPORT WOOD FINISHING CO.
MANUFACTURERS OF
WHEELER'S PATENT WOOD FILLER.
BREINIG'S LITHOGEN SILICATE PAINT.
ADAPTED TO ALL CLIMATES ESPECIALLY MARINE EXPOSURES.
GRANVILLE M. BREINIG.
PRINCIPAL OFFICE, NEW MILFORD, CONN.
GENERAL AGENT & SUPT. NEW YORK, 240 Pearl St.

"IMPROVEMENT THE ORDER OF THE AGE."
The Smith Premier Typewriter
Embodies the most Progressive Mechanical Principles.
All the Essential Features Greatly Perfected.
Perfect and Permanent Alignment.
Easiest Kunning, and Nearly Silent.
All type cleaned in Ten Seconds without Soiling the Hands.
The Smith Premier Typewriter Co., Syracuse, N. Y., U. S. A.
We have 20 branch offices in the principal cities throughout the United States.

KODAKS.
Take one with You to the World's Fair.
They're the only practical camera for the purpose. No bulky glass plates—no troublesome holders—no need of hunting up a dark room.
Eastman Kodak Co., Rochester, N. Y.

H.W. Johns Asbestos Roofing
This Roofing may be easily applied by unskilled workmen. It is more durable than tin and costs about one-half as much.
H.W. JOHN'S MFG CO. NEW YORK, JERSEY CITY, CHICAGO, PHILADELPHIA, BOSTON, ATLANTA

ZINC ETCHING HALFTONE PROCESS
Printer OF MAGAZINES, BOOKS, SOUVENIRS.
A.H. KELLOGG SCOTT & BOWNE BUILDING New York.

ELECTRO VAPOR ENGINE.
GAS OR GASOLINE FOR FUEL.
NO BOILER. NO FIRE. NO DANGER. NO ENGINEER.
THOMAS KANE & CO., CHICAGO, ILL.



AGENTS WANTED FOR FINE TOOLS IN EVERY SHOP.
C.H. BESLEY & CO. CHICAGO, ILL. U.S.A.

IN ONE MINUTE IT WILL CONVINCED YOU OF OUR ABILITY TO SUPPLY TOILET PAPER FOR LESS MONEY THAN IT CAN BE OBTAINED ELSEWHERE.
A.P. WEAVER CO. ALBANY, N.Y.

ELECTRICAL \* MINING \* MACHINERY
Electric Mine Locomotives, Electric Drills, Electric Coal Cutters, Electric Pumps, Electric Hoists.
GENERAL ELECTRIC COMPANY, DISTRICT OFFICES:

ENGINES, BOILERS & MACHINE TOOLS.
Columbia Bicycles.
5 6
Pope Mfg. Co.
Boston, Chicago, New York, Hartford.

ASTRONOMY
Poole Bros. Celestial Planisphere and Celestial Handbook just published.
POOLE BROS., CHICAGO, ILL.

PATENT JACKET KETTLES
Plain or Porcelain Lined.
BARROWS SAVERY CO., 8, Front & Reed Streets, Philadelphia, Pa.

Motor of 19th Century
Can be used any place, to do any work, and by any one. No Boiler! No Fire! No Steam! No Ashes! No Goggles! No Engineer!
CHARTER GAS ENGINE CO., P. O. Box 148, Sterling, Ill.

Lunkenheimer's Lever Throttle Valve
Adopted and highly endorsed by numerous Engine Builders throughout the United States.
Lunkenheimer Company, Cincinnati, Ohio, U. S. A.

NATIONAL TYPEWRITER.
Standard Keyboard. Great Manifold.
NATIONAL TYPEWRITER CO., 719, 717, 719 Arch St., Philada., Pa.

The American Bell Telephone Company
125 MILK ST., BOSTON, MASS.
This Company owns the Letters Patent No. 186,787, granted to Alexander Graham Bell, January 30, 1877, the scope of which has been defined by the Supreme Court of the United States in the following terms:

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The SCIENTIFIC AMERICAN is printed with CHAS. FINE'S JOHNSON & CO.'S INK.